

first rotatable element being connected to a fourth rotatable element by means of a rotatable axle, rotates clockwise together with the fourth element around the fourth element axle and at the same time rotates counter-clockwise around its own geometric axle of rotation, together with a real axle, which is connecting both rotating elements to each other, while the second rotatable element, being connected to the first rotatable element by means of overrunning clutch and to the third rotatable element by means of toothing, rotates clockwise around the third and fourth element's geometric axle of rotation, as well as a first element, and at the same time the second element rotates counter-clockwise around its own axle of rotation and due to that, makes the third element, as well as driving sprocket of a vehicle, rotate faster than usual, than when the driving sprocket rotates together with a crank's axle under the same equal condition, and this proves that output energy, in such a system, exceeding the input energy.

Replace Claim 2 with the following Claim 2:

2 (once amended) The system of claim 1, wherein the first rotatable element is a special pedal, as a receiver of power, from its unbalanced mass and from foot turning, which is supported also by a foot strap, and can be replaced with a regular pedal.

Replace Claim 3 with the following Claim 3:

3 (once amended) The system of claim 1, wherein the third element is a disk with a chain periphery instead of a gear periphery, while the second element is a sprocket, combined with an overrunning clutch for one-way Kinematic interaction with a chain periphery.

Replace Claim 4 with the following Claim 4:

4 (once amended) The system of claim 1, wherein the fourth element is a crank, as a support for a special pedal.

Replace Claim 5 with the following Claim 5:

5(once amended) A method of getting, for a bicycle and other pedal-driven vehicles mechanical energy output exceeding muscular energy input, due to the gravitational Lever,

Comprising the steps of:

placing the first unbalanced element on a fourth rotatable element,

placing the second rotatable element on a first element,

connecting the first element and the second element to one another by means of an overrunning clutch

placing the third element on a crank's axle for freely rotation on it,

attaching the fourth element to a crank's axle for rotation together with it,

rotating the first element powered by two different sources of energy, such as a foot muscular energy and gravitational energy and converts that energy into mechanical energy for transmission of the driving power, via a second one-way rotatable element to a third opposite way rotatable element, which is together with a driving sprocket, freely rotates on a crank's axle the fourth rotatable element, being connected to a crank's axle rotates clockwise together with a first element

the first and second elements at the same time rotate counter-clockwise around its own

geometric axle together with a real axle, which is connected the first and the fourth elements to each other,  
the second rotatable element, being connected to the first and to the third elements at the same time, makes the third element, as well as a driving sprocket of a vehicle, rotates faster than usual, then when driving sprocket rotates together with a crank's axle under the same equal power conditions, and this is proves that output energy in such a case, exceeding the input energy

In the summary:

Replace page 2 (lines 10-35) and page 3 (lines 1-18) to read:

Accordingly, it is an object of the present invention to provide a new System and Method of getting, for a bicycle and other pedal-driven vehicles, mechanical energy output exceeding muscular energy input, due to the gravitational Lever.

In keeping with these objectives and with others, which will become apparent hereinafter, one feature of the present invention resides, briefly stated, in a system and method of getting, for a bicycle and other pedal-driven vehicles, mechanical energy output exceeding muscular energy input, which have a first rotatable unbalanced element, as a receiver of power from two different sources of energy, such as a foot muscular energy and gravitational energy of its unbalanced part, which converts that energy into mechanical energy for transmission of the driving power, via a second one-way rotatable element and a third opposite way rotatable element, to a driving sprocket of a vehicle, which is fixed to a third element and freely rotates with it on a crank's axle, for transmission of the driving power, via the chain to a freewheel and then to a drive wheel of the vehicle, where it is in the course of normal forward motion from the pedals. The first rotatable element being connected to a fourth rotatable element by means of a rotatable axle, rotates clockwise together with the fourth element around the fourth element axle and at the same time rotates counter-clockwise around it's own geometric axle of rotation, together with a real axle, which is connecting both rotating elements to each other, while the second rotatable element, being connected to the first rotatable element by means of overrunning clutch and to the third rotatable element by means of toothing, rotates clockwise around the third and fourth element's geometric axle at the same time the second element rotates counter-clockwise around its own axle of rotation and due to that, makes the third element, as well as a driving sprocket of a vehicle, rotate faster than usual, than when the driving sprocket rotates together with a crank's axle under the same equal condition, and this proves that output energy in such a system exceeding the input energy.

The method of the invention includes the steps of interaction between four rotatable elements, which are powered by two different sources of energy, such as foot muscular energy and gravitational energy and, due to that provides mechanical energy output exceeding muscular energy input.

In the Description of a preferred Embodiment

Replace the first and second paragraphs on page 4 to read:

A system of getting, for a bicycle and other pedal-driven vehicles, mechanical energy output exceeding muscular energy input has two rotatable parts, one of which is placed on a crank's axle "I-I" for a freely rotation on it, while the other part is placed on a crank's axle for a rotation with it.

The first one includes driving sprocket of a vehicle, which is fixed to a disk 5, having chain periphery 6 [ Fig. 1]

The second part [Fig. 1] includes crank 8 and all details, which are connecting with it.

The pedal 1 performs three functions:

getting power from two different sources of energy, such as a foot muscular energy and gravitational energy of the unbalanced mass, which are, by means of this pedal convert themselves into mechanical energy;

transmission of the driving power via the rotating axle 2, overrunning clutch 3, sprocket 4, and chain periphery 6 of disk 5, to the driving sprocket and then to a freewheel and driving wheel of a vehicle;

transmission of the driving power straight on the driving sprocket of a vehicle without kinematic interaction between sprocket 4 and chain periphery 6 of a disk 5, as a kinematic couple

[Fig. 1], [Fig. 2]

A section of pedal 1 has a contour of a spherical sector as shown in [Fig. 3] Practically such design is a gravitational Lever, which is in combination with a pedal strap 7 provide vertical position of the pedal 1 during it rotation together with the axle 2 around the crank's axle "I-I" and its own geometric axle of rotation "II-II". It means that in the course of normal forward motion of the pedals, they are rotating clockwise around axle "II-II"

The sprocket 4 is powered by gravity weight of "GL" as an unbalanced part of a pedal 1 and by foot muscular force, which is supported also by strap 7 and rotates counter-clockwise, while disk 5 with a chain periphery 6 rotates clockwise, the same way as a pedal, but faster than pedal 1 itself.

In the Abstract:

Replace Abstract to read:

Four rotatable connectable to each other and to a gravitational mass elements are making up a rotation, where is mechanical energy output exceeding muscular energy input.

Remarks

The corrected Application Papers are based on the experimental fact that the third element together with a driving sprocket rotate faster than the fourth element, as a crank together with a crank's axle and pedal 1.

Throughout the description there were grammatical errors, which are corrected by the amendment herein. For example the Title (page 1) was changed to read:

"System and Method of getting, for a bicycle and other pedal-driven vehicles, mechanical energy output exceeding muscular energy input, due to the gravitational Lever"

The last paragraph on the page 1 and lines 1-6 on the page 2 was changed to read:

In the present invention the same function is carried out by gravitational Lever, as an unbalanced part of the pedal, which is powered by this part and by foot muscular energy and because of that, keeps itself vertical during rotation.

An important part of such pedal is the foot straps as it also support the combination of power.

Such pedal, having an unbalanced part works like gravitational Lever. It means more economical and reliable, specially when the speed of rotation and centrifugal forces are increasing. The new transmissions of a bicycle and other pedal-driven vehicles were tested in a laboratory and on a roads since 1999, after the patent 5,921,133, as a reference was published.

The changes in drawings reflects the position of a "GL" [Fig.3] and character of interactions with a crank's axle [Fig. 1]

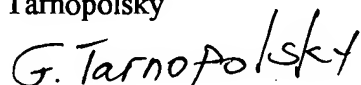
Claims 1-5 also reflect these changes

There are no new matters according to description of a preferred embodiment.

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Respectfully submitted

  
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